

## REMARKS

The Official Action of May 10, 2006 has been carefully considered and reconsideration of the application as amended is respectfully requested.

Claims 1-4, 6-8, 9-12, 14 and 15 stand rejected under 35 USC 103(a) as allegedly being unpatentable over Rodriguez et al. Claim 5 and 13 stand rejected under 35 USC 103(a) as allegedly being unpatentable over Rodriguez et al in view of Panepinto. Applicants respectfully traverse these rejections.

The claimed invention is based at least in part on Applicants' discovery that saline water of high salinity, such as sea water which is normally not suitable for leather processing, may be used in an initial (soaking) operation if the soaking in the saline water is done in the presence of a salt of an alkali metal or alkaline earth metal.

The Examiner cites the decision Ex Parte Rubin, 128 USPQ 440, 441, 442 (POBA 1959) for the proposition that changing the order of steps does not render a claimed process non-obvious over the prior art.

In contradistinction to the conventional wisdom, the claimed invention recites the use of salt water of high salinity in an initial, soaking step (step (i)), for facilitating later removal of non-collagenous material and, only **after** the soaking step, "liming" the soaked stock (i.e., treating with alkali) to swell the protein that facilitates easy removal of the non-collagenous layer. This establishes that the order of steps is important to obtaining the result desired by the applicants.

In contrast to the invention recited in the claims, Rodriguez et al disclose a method of leather processing whereby raw hides/skins are subjected to alkali treatment in the presence of salt in a single, combined pretreatment operation. There is no initial step of soaking in saline water of high salinity in the presence of an alkali metal or alkaline earth metal salt, and there is no motivation in

Rodriguez or in the prior art generally to modify the reference to provide this initial (separate) step. In fact, as stated in column 2, lines 52-53 of Rodriguez, it is an object of the invention to combine various pre-treatment operations into a single operation. This in fact teaches away from the provision of a separate soaking step. See the flow chart at Rodriguez at, e.g., column 3, lines 25-50. In view of this teaching away, there would be no motivation, absent the hindsight provided by the present specification, to modify the reference to arrive at the claimed invention. See MPEP Section 2143.01(VI) ("The Proposed Modification Cannot Change the Principle of Operation of a Reference").

The Examiner contends that it would have been obvious to include a pretreatment step of salting the hides or skins because Rodriguez at column 3, line 63 teaches that the hides or skins used in Rodriguez' combined treatment may have been previously salted. As stated in col. 1, lines 28-60 of Rodriguez

The hides and skins used for producing leather are, to a great extent, a by-product of the meat packing industry. The are generally preserved for shipping to tanneries either by treatment with salt rubbed on the flesh side, by soaking in a brine solution, by drying, or as fresh hides. In the salted condition, the hides are known as "green salted hides" and a typical analysis has shown they have generally the following composition:

	Percent
Water	44.3
Salt	14.4
Protein	37.3
Fat	4.5

The skins are received in this condition at the tannery and the first object is to restore the skin as near their original condition as possible. Thus, the first step at the tannery, after sorting and classifying of the skins, is to wash and soak the hides to restore water to the dried hides and to remove the salt or

brine from the skins preserved in that manner.

However, this pretreatment step is not the equivalent of the recited step (i). In step (i) the raw hides/skins are treated with not less than 300% w/v of salt of an alkali metal or alkaline earth metal and in step (ii) the soaked hides/skins are treated with not less than 2% w/w of alkali metal in combination with not more than 200% w/v of saline water. As the percentage of alkali metal used in step (ii) is not encompassed in step (i) and the amount of water used in step (iii) is not encompassed in step (i), the claimed process is not obvious from Rodriguez that does not disclose or suggest these treatment steps.

Raw hides and skin mentioned in present invention indicate wet salted hides and skins, conventional Indian raw material, which consists atleast 20% salt (w/w). Whereas Rodriguez; et al., indicates a process of using salt for soaking dried skins free of any salt (which is done normally to remove interfibrillary proteins). The total salt content for soaking in Rodriguez ; et al., is only 3% (30,000 ppm) whereas the present invention deals with soaking hides and skins containing not less than 15% salt (w/w) in saline water having upto 30,000 ppm of chlorides making total chlorides content to as high as 95,000 ppm. Further taking in to consideration the composition of a dried skin, the protein content will be 75~80% with about 20-25% moisture. Hence typically for 100 kilos of dried skin the protein: salt ratio employed is about 80:3 (since 3% salt is added in soaking).. However, according to Rodriguez, col. 1, lines 35-41, the protein content will be ~37% and salt content ~14%. This material containing protein:salt ratio of 37:14 is treated with saline water containing ~3% salt i.e., total salinity being 14% from hide, 3% from water, making it 17%. So the protein:salt ratio employed in the present study is 37:17 i.e., for 100 kilos of protein nearly 46 kilos of salt is employed.

Accordingly, the cited primary reference, even with a pretreatment with salt, does not show all features of the claimed invention. Since the secondary reference cannot supplement the deficiencies in the primary reference, it is respectfully submitted that the references cannot be used to

set forth even a *prima facie* case of obviousness for the invention as claimed (see MPEP Section 706.02(j)).

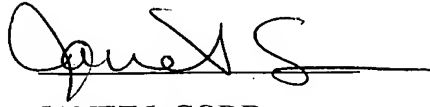
As to use of calcium hydroxide for treating hides (claims 5 and 13) it is respectfully noted that use of calcium hydroxide forms a conventional unit operation of leather processing, whereby the soaked hides/skins are subjected to liming operation. However, in the claimed invention, the calcium hydroxide can play a dual role. The first one is to facilitate the use of highly saline water, which is normally not suitable for leather processing. As mentioned earlier, water containing high salinity cannot be used normally for leather processing. This has been made possible in the claimed invention by using calcium hydroxide in step (i). This has nothing to do with the conventional unit operations for leather processing.

The second role of the calcium hydroxide is to carry out the conventional unit operation of liming, as disclosed in the prior art literature including the cited patents. However, this would not show or suggest the use of alkali salt in step (i), as required by the claims.

In short the claimed invention provides the option of utilizing the vast source of sea water for leather processing, which is water intensive, in a manner not shown or suggested in the prior art.

In view of the above, it is respectfully submitted that all rejections and objections of record have been overcome and that the application is now in allowable form. An early notice of allowance is earnestly solicited and is believed to be fully warranted.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Janet I. Cord", written over a horizontal line.

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